CLAIM AMENDMENTS

1. (Withdrawn) Apparatus for effecting a desired geometric change in the annulus of a heart valve, said apparatus comprising:

a plication band comprising:

first and second legs each having a first end, said first ends of said first and second legs having a tissue piercing configuration; and

a bridge having first and second ends, said first end of said bridge being connected to said first leg and said second end of said bridge being connected to said second leg such that said first ends of said first and second legs are separated by a first given distance;

said bridge being configured such that when said first ends of said first and second legs have pierced tissue at said first given distance, said bridge may be deformed so as to cause said first ends of said first and second legs to move toward one another so as to thereafter be separated by a second, shorter given distance, whereby said first and second legs gather together the pierced tissue to effect a desired geometric change in the annulus of the heart valve.

2. (Withdrawn) Apparatus according to claim 1 wherein said bridge may be deformed so as to cause said first ends to point in opposition to one another.

3. (Previously Presented) The plication band according to claim 28 wherein said bridge portion further comprises a through-hole for receiving a linking construct whereby said plication band may be linked to a second plication band of like construction.

4. (Previously Presented) The plication band according to claim 3 wherein said bridge portion is crimpable so as to capture said linking construct within said through-hole.

5. (Previously Presented) The plication band according to claim 3 wherein said through-hole has a circular configuration so as to receive a round filament.

6. (Previously Presented) The plication band according to claim 3 wherein said through-hole has a elongated configuration so as to receive a flat strap.

7. (Withdrawn) Apparatus for effecting a desired geometric change the annulus of a heart valve, said apparatus comprising:

first and second plication bands, each said plication band comprising:

first and second legs each having a first end, said first ends of said first and second legs having a tissue piercing configuration; and

a bridge having first and second ends, said first end of said bridge being connected to said first leg and said second end of said bridge being connected to said second leg such that said first ends of said first and second legs are separated by a first given distance;

said bridge being configured such that when said first ends of said first and second legs have pierced tissue at said first given distance, said bridge may be deformed so as to cause said first ends of said first and second legs to move toward one another so as to thereafter be separated by a second, shorter given distance, whereby said first and second legs gather together the pierced tissue to effect a desired geometric change in the annulus of the heart valve; and

a linking construct connected to said first and second plication bands.

8. (Withdrawn) Apparatus according to claim 7 wherein the bridge of each plication band may be deformed so as to cause said first ends of that plication band to point in opposition to one another.

9. (Withdrawn) Apparatus according to claim 7 wherein the bridge of each plication band further comprises a through-hole for receiving said linking construct.

10. (Withdrawn) Apparatus according to claim 9 wherein the bridge of each plication band is crimpable so as to capture said linking construct within said through-hole.

11. (Withdrawn) The plication band according to claim 3 wherein the linking construct comprises a round filament, and further wherein said through-hole is provided with a circular configuration so as to receive said round filament.

12. (Withdrawn) The plication band according to claim 3 wherein the linking construct comprises a flat strap, and further wherein said through-hole is provided with an elongated configuration so as to receive said flat strap.

13. (Withdrawn) The plication band according to claim 3 wherein said linking construct comprises a resilient material.

14. (Withdrawn) The plication band according to claim 3 wherein said linking construct comprises a formable material such that said formable material can be set into a desired shape.

15. (Withdrawn) Apparatus according to claim 7 wherein said linking construct is permanently connected to said first and second plication bands.

16. (Withdrawn) Apparatus according to claim 7 wherein said linking construct comprises a linear linkage extending between said first and second plication bands.

17. (Withdrawn) Apparatus according to claim 7 wherein said linking construct comprises a linkage strip extending between said first and second plication bands.

18. (Withdrawn) Apparatus according to claim 7 wherein said linking construct comprises a linkage rod extending between said first and second plication bands.

19. (Withdrawn) A method for reducing the circumference of the annulus of a heart valve, said method comprising the steps of:

providing apparatus for effecting a desired geometric change in the annulus of a heart valve, said apparatus comprising:

a plication band comprising:

first and second legs each having a first end, said first ends of said first and second legs having a tissue piercing configuration; and

a bridge having first and second ends, said first end of said bridge being connected to said first leg and said second end of said bridge being connected to said second leg such that said first ends of said first and second legs are separated by a first given distance;

said bridge being configured such that when said first ends of said first and second legs have pierced tissue at said first given distance, said bridge may be deformed so as to cause said first ends of said first and second legs to move toward one another so as to thereafter be separated by a second, shorter given distance, whereby said first and second legs gather together the pierced tissue to effect a desired geometric change in the annulus of the heart valve; and

deploying the plication band into the annulus of the heart valve so as to reduce the circumference of the heart valve.

20. (Withdrawn) A method according to claim 19 wherein said apparatus comprises a plurality of plication bands, with said plurality of plication bands being sequentially deployed into the annulus of heart valve.

21. (Withdrawn) A method for reducing the circumference of the annulus of a heart valve, said method comprising the steps of:

providing apparatus for effecting a desired geometric change in the annulus of a heart valve, said apparatus comprising:

first and second plication bands, each said plication band comprising:

first and second legs each having a first end, said first ends of said first and second legs having a tissue piercing configuration; and

a bridge having first and second ends, said first end of said bridge being connected to said first leg and said second end of said bridge being connected to said second leg such that said first ends of said first and second legs are separated by a first given distance;

said bridge being configured such that when said first ends of said first and second legs have pierced tissue at said first given distance, said bridge may be deformed so as to cause said first ends of said first and second legs to move toward one another so as to thereafter be separated by a second, shorter given distance, whereby said first and second legs gather together the pierced tissue to effect a desired geometric change in the annulus of the heart valve; and

a linking construct connected to said first and second plication bands;

deploying said first plication band in tissue;

tensioning said linkage construct;

deploying said second plication band in tissue; and

releasing the tension on said linkage construct, whereupon said linkage construct will further reduce the circumference of the annulus of the heart valve.

22. (Withdrawn) A method for reducing the circumference of the annulus of a heart valve, said method comprising the steps of:

providing apparatus for effecting a desired geometric change in the annulus of a heart valve, said apparatus comprising:

first and second plication bands, each said plication band comprising:

first and second legs each having a first end, said first ends of said first and second legs having a tissue piercing configuration; and

a bridge having first and second ends, said first end of said bridge being connected to said first leg and said second end of said bridge being connected to said second leg such that said first ends of said first and second legs are separated by a first given distance;

said bridge being configured such that when said first ends of said first and second legs have pierced tissue at said first given distance, said bridge may be deformed so as to cause said first ends of said first and second legs to move toward one another so as to thereafter be separated by a second, shorter given distance, whereby said first and second legs gather together the pierced tissue to effect a desired geometric change in the annulus of the heart valve; and

a linking construct connected to said first and second plication bands;

deploying said first plication band in tissue, and deploying said second plication band in tissue; and

deforming said linkage construct so as to draw said first and second plication bands together so as to further reduce the circumference of the annulus of the heart valve.

23. (Withdrawn) A method for reducing the circumference of the annulus of a heart valve, said method comprising the steps of:

providing apparatus for effecting a desired geometric change in the annulus of a heart valve, said apparatus comprising:

a plication band comprising:

first and second legs each having a first end, said first ends of said first and second legs having a tissue piercing configuration; and

a bridge having first and second ends, said first end of said bridge being connected to said first leg and said second end of said bridge being connected to said second leg such that said first ends of said first and second legs are separated by a first given distance;

said bridge being configured such that when said first ends of said first and second legs have pierced tissue at said first given distance, said bridge may be deformed so as to cause said first ends of said first and second legs to move toward one another so as to thereafter be separated by a second, shorter given distance, whereby said first and second legs gather together the pierced tissue to effect a desired geometric change in the annulus of the heart valve;

positioning said plication band in said left atrium of the heart; and

deploying said plication band into said annulus of the heart valve so as to reduce the circumference of the annulus of the heart valve.

24. (Withdrawn) A method for effecting a desired geometric change in the annulus of a heart valve, said method comprising the steps of:

providing apparatus for effecting a desired geometric change in the annulus of a heart valve, said apparatus comprising:

a plication band comprising:

first and second legs each having a first end, said first ends of said first and second legs having a tissue piercing configuration; and

a bridge having first and second ends, said first end of said first bridge being connected to said first leg and said second end of said bridge being connected to said second leg such that said first ends of said first and second legs are separated by first given distance;

said bridge being configured such that when said first ends of said first and second legs have pierced tissue at said first given distance, said bridge may be deformed so as to cause said first ends of said first and second legs to move toward one another so as to thereafter be separated by a second, shorter given distance, whereby said first and second legs gather together the pierced tissue to effect a desired geometric change in the annulus of the heart valve;

positioning said plication band in a vascular structure of the heart; and

deploying said plication band into the side wall of the vascular structure so as to effect a desired geometric change in said annulus of the heart valve.

25. (Withdrawn) A method according to claim 24 wherein said vascular structure comprises at least one of the coronary sinus and the great cardiac vein.

26. (Withdrawn) A method for effecting a desired geometric change in the annulus of a heart valve, said method comprising the steps of:

providing apparatus for effecting a desired geometric change in the annulus of a heart valve, said apparatus comprising:

a plication band comprising:

first and second legs each having a first end, said first ends of said first and second legs having a tissue piercing configuration; and

a bridge having first and second ends, said first end of said bridge being connected to said first leg and said second end of said bridge being connected to said second leg such that said first ends of said first and second legs are separated by a first given distance;

said bridge being configured such that when said first ends of said first and second legs have pierced tissue at said first given distance, said bridge may be deformed so as to cause said first ends of said first and second legs to move toward one another so as to thereafter be separated by a second, shorter given distance, whereby said first and second legs gather together the pierced tissue to effect a desired geometric change in the annulus of the heart valve;

positioning said plication band against an outside surface of the heart; and

deploying said plication band into the outside surface of the heart so as to effect a desired geometric change in said annulus of the heart valve.

27. (Withdrawn) A method according to claim 26 wherein said apparatus is incorporated into a cardiac restraint device for reducing the dilatation of the heart.

28. (Previously Presented) A plication band for use to effect a geometric change in living tissue, the band comprising a bridge portion interconnecting spaced first and second leg portions extending in parallel therefrom, each of said leg portions having a sharp free end adapted to pierce the tissue, and said bridge portion being deformable to effect movement of the leg portion free ends toward each other to effect the geometric change in tissue in which the free ends are disposed.